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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/867,303	05/29/2001	Sarat C. Manni	13768.604.8	6147

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EXAMINER

BASOM, BLAINE T

ART UNIT	PAPER NUMBER
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2173

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/867,303

Applicant(s)

MANNI ET AL.

Examiner ,

Blaine Basom

Art Unit

2173

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

AD

DETAILED ACTION

Response to Arguments

The Examiner acknowledges the Applicants' cancellation of claims 1-26, and the addition of new claims 27-54. Regarding the new claims, the Applicants argue that neither the UPnP architecture document (the "Universal Plug and Play Device Architecture" document, which is cited in the Applicants' IDS of 5/23/2003) nor Kekic (U.S. Patent No. 6,272,537 to Kekic et al.), presented in the previous Office Action, teach the features of the pending claims. The Examiner respectfully disagrees for the reasons described in the rejection below. Accordingly, the Applicant's arguments have been fully considered, but are not persuasive.

Claim Objections

Claims 35 and 50 objected to because of the following informalities: The phrase, "the service description viewer window being different than first window," which is recited in each of these claims, is considered grammatically incorrect. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 27-34, 37-41, 43-49, and 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over the "Universal Plug and Play Device Architecture" document, which is cited in the Applicants' IDS of 5/23/2003, and also over U.S. Patent No. 6,272,537, which is attributed to Kekic et al. (and hereafter referred to as "Kekic"). In general, the Universal Plug and Play architecture document describes Universal Plug and Play (UPnP), an architecture describing the network connectivity of various types of appliances, wireless devices, and personal computers (see the section entitled "What is Universal Plug and Play?," beginning on page 1). UPnP incorporates Internet components to provide protocols by which a control point discovers, controls, and displays features of such devices (see pages 1 and 2). This control point comprises a browser by which it retrieves and displays a "presentation page" for a particular device, the presentation page being created by the vendor of the device, and providing means to control and display the status of the device (see Section 5, starting on page 60). Consequently, such a control point is considered a display device having rendered thereon a user control point tool for discovering, controlling, and displaying UPnP devices on a system, and is considered to teach a method for discovering, controlling, and displaying such UPnP devices.

Specifically regarding claims 27-31 and 43-46, the above-described control point may initiate a discovery process to discover devices on the particular network with which it is

Art Unit: 2173

associated (see section 1.2 beginning on page 12). This discovery process may involve one of a plurality of discovery options, such as a find by type option for searching by type of UPnP device, a find by UUID (Universally Unique Identifier), considered a unique device name, search option for finding UPnP devices by unique name, and an asynchronous search option for finding all UPnP compliant devices on the network (see section 1.2.2 beginning on page 13). The control point sends to UPnP devices on the network a multicast discovery message, referred to as "M-SEARCH," indicating the search criteria of one of these options (see section 1.2.2, beginning on page 13). In response, any UPnP devices on the network matching the search criteria send to the control point a response message comprising device information (see section 1.2.3, beginning on page 14). Such device information may comprise a URL linking to a device description of the device (see section 1.2.3, beginning on page 14), the description comprising a presentation URL for a presentation page associated with the device (see section 2.1 beginning on page 17). This presentation page, briefly described above, is accessed and displayed using a browser of the control point to connect to the presentation URL (see section 5, beginning on page 60). The UPnP architecture document thus teaches a control point, like recited in claims 27-31, having rendered thereon a presentation page for controlling and displaying a particular UPnP device, the device being one of a plurality of different types of devices (for example, see section 5 beginning on page 63). However, such a presentation page is created by the particular vendor of the device, for the particular device (see section 5 beginning on page 63). Such a presentation page is therefore not a *generic* user control point tool, as recited in claims 27 and 43. Additionally, the UPnP architecture document does not explicitly describe user interface features for discovering and controlling such devices. Thus, although the control point may initiate a discovery process

Art Unit: 2173

dependent on one of a plurality of selectable discovery options, as is described above for example, the UPnP architecture document does not explicitly teach that it comprises a window for displaying discovery options, and a start discovery button that must be selected prior to initiating discovery, as are described in claims 27-30 and 43-46. Although the control point collects device information indicating devices that match search criteria of a discovery process, as described above, the UPnP architecture document does not explicitly teach that it displays such devices via a list of selectable UPnP devices, as is further recited in claims 27 and 43. However, generic control point tools, comprising graphical user interface elements for discovering and controlling network devices, are known in the art.

For example, Kekic describes a control point used to discover and control each of a plurality of devices existing in a network (for example, see column 6, line 50 – column 7, line 19). This control point accesses and displays an “element manager,” which like the presentation page described above, is created by the particular vendor of the device for the particular device (see column 6, lines 37-49), and provides a graphical user interface to view the status of, and invoke actions on, the particular device (see column 5, line 25 – column 7, line 14). As such an element manager is created specifically for the particular device, the element manager is not considered a *generic* user control point tool. However, Kekic further discloses that the control point may comprise additional means to discover and control devices on the network; Kekic teaches that the control point may display a user interface that may be applied to discover and control network devices in a uniform manner, i.e. via a similar interface. Specifically, the control point comprises an “auto discovery panel” and an “MIB browser” (see column 22, lines 33-52; and column 43, lines 14-55), which are not specifically associated with any device, and

Art Unit: 2173

which for the following reasons, are considered to constitute a generic user control point tool for discovering, controlling, and displaying network devices.

Kekic discloses that a user of the control point may implement the auto discovery panel to initiate a discovery process to search for devices on a particular network, whereby like the UPnP architecture described above, this discovery process may involve one of a plurality of discovery options (see column 43, line 15 – column 45, line 17). For example, as is shown in figure 27, the auto discovery panel comprises a “Limited Search” field, designated by reference number 2703, which is for displaying and selecting such discovery options (see column 43, line 46 – column 44, line 57). The auto discovery panel further comprises a “Discover” button, designated by reference number 2706, which is for initiating the discovery process (see column 44, lines 58-66). Any devices found by the discovery process are displayed within a selectable list, called a “navigation tree” (see column 45, lines 5-17). Kekic thus broadly teaches displaying, within a window, selectable discovery options for discovering network devices; displaying a search button for initiating the discovery of network devices according to selected options, and displaying discovered network devices within a list of a graphical user interface. It would therefore have been obvious to one of ordinary skill in the art, having the teachings of the UPnP document and Kekic before him at the time the invention was made, to modify the control point taught by the UPnP document to include a generic control point tool, like the auto discovery panel and navigation tree of Kekic, having user interface elements to discover and control UPnP devices in a uniform manner. In other words, it would have been obvious to include a window for displaying discovery options, a start discovery button that must be selected prior to initiating discovery, and a list selectable discovered devices, like included in the

Art Unit: 2173

discovery panel and navigation tree of Kekic. It would have been advantageous to one of ordinary skill to utilize these combined teachings of the UPnP document and Kekic, because such graphical user interface elements provide a functionality for discovering and controlling network devices, even if the vendor of the network device does not provide an interface to control the device, as is demonstrated by Kekic.

Accordingly, the UPnP document and Kekic suggest a generic user control point tool for discovering, controlling, and displaying UPnP devices on a network, the generic user control point tool comprising: a user interface that displays, in a first window, i.e. an auto discovery panel, a plurality of selectable search type options that correspond to different types of searches for discovering UPnP devices on the system, wherein response to user selection of any of the selectable search type options, the generic user control point tool collects UPnP device information that is displayed as a list of selectable UPnP devices at the user interface; wherein the plurality of selectable search type options include a find by type search option for searching by type of UPnP device, a find by unique device name search option for finding UPnP devices by unique name, and an asynchronous search option for finding all UPnP compliant devices on the network; wherein the user interface further displays a start discovery button that must be selected prior to initiating discovery according to a selected search type option; and wherein the generic user control point tool collects UPnP device information in response to sending a multicast discovery message to UPnP devices that the UPnP devices respond to when any embedded devices or services of the UPnP devices match search criteria including in the multicast discovery message, like recited in claims 27-30 and 43-46.

Art Unit: 2173

As per claim 31, the UPnP document and Kekic teaches displaying discovered devices within a selectable list, referred to as a navigation tree, as is described above. Such a navigation tree is not a pull-down list, as described recited in claim 31. Nevertheless, pull-down lists and their use for displaying and providing selectable items are notoriously well-known in the art. The Examiner takes OFFICIAL NOTICE of this teaching. Accordingly, it would have been obvious to one of ordinary skill in the art, having the teachings of the UPnP architecture document and Kekic before him at the time the invention was made, to modify the navigation tree of Kekic and the UPnP architecture document, so that it is implemented as a pull-down list, because such pull-down lists require less display space, as is known in the art.

Regarding claims 32-34 and 47-49, the UPnP architecture document discloses that the above-described control point may further retrieve a device description from a selected device. This device description comprises a plurality of data fields containing device property information for the device (see section 2, beginning at the bottom of page 15). For example, such data fields may specify the type of the device, the manufacturer of the device, and the model name of the device (see section 2.1, beginning on page 17). This data is considered property information of the selected device, like expressed in claims 32-33 and 47-48. Additionally, the device description comprises a list of services offered by the device, and for each service, a URL linking to a service description document, like recited in claims 34 and 49 (see section 2.1, beginning on page 17). However, as described above, the UPnP architecture document does not explicitly describe user interface features for accessing and presenting such information. Nevertheless, generic control point tools, comprising graphical user interface

Art Unit: 2173

elements for accessing and presenting such information from network devices, are known in the art.

For example Kekic discloses that, upon selecting of a device in the above-described navigation tree, the user may select another button to open an "MIB Browser" (see column 51, lines 43-54). This MIB Browser is used to access and display an "MIB file" of the device (see column 51, line 43 – column 2, line 45), whereby like the device description provided by a UPnP device, this MIB file maintains device property information (for example, see column 2, line 20 – column 4, line 49). Consequently, the MIB browser, which displays an MIB file, is considered a device properties display. Kekic thus broadly teaches providing an interface element which may be selected in order to access and display property information of a selected network device, whereby the property information is displayed in a window separate from that displaying options for discovering network devices. As described above, it would have been obvious to one of ordinary skill in the art, having the teachings of the UPnP document and Kekic before him at the time the invention was made, to modify the control point taught by the UPnP document to include a generic control point tool, like that of Kekic, having user interface elements to discover and control UPnP devices in a uniform manner. In other words, it would have been obvious to include a selectable properties button which may be activated to display the device description of a selected network device, whereby the device description is displayed in a separate window from that used to discover the devices, as is done by Kekic. It would have been advantageous to one of ordinary skill to utilize these combined teachings of the UPnP document and Kekic, because such graphical user interface elements provide a functionality for discovering and

controlling network devices, even if the vendor of the network device does not provide an interface to control the device, as is demonstrated by Kekic.

Accordingly, the UPnP document and Kekic further suggest a generic user control point tool comprising: an interface that displays a selectable properties button corresponding to properties of selectable discovered UPnP devices, wherein the user control point tool obtains and displays properties corresponding to a selected UPnP device when the selected UPnP device is selected from the list and when the selectable properties button is selected; wherein the generic user control point tool displays the properties in a separate window from that used to display search options; and wherein the user interface also displays a list of services available to the selected UPnP device, when the selectable properties button is selected, and wherein the user interface displays a URL to a service description document in a field of the user interface when information is available for the services of the selected UPnP device in the service description document, like recited in claims 32-34 and 47-49.

As per claims 37-41 and 51-53, the device description of the UPnP architecture described above further comprises a plurality of fields denoting the one or more services associated with the particular device (see section 2.1 beginning on page 17). For each service, the device description comprises a URL which links to a description of the service (see section 2.1 beginning on page 17). This service description comprises a list of all the state variables associated with the particular service (see section 2.3, beginning on page 21); the control point may query the device to ascertain a current value of one or more of these state variables (see section 3.3, beginning on page 43). Additionally, the service description comprises a list of all

Art Unit: 2173

the “actions” for the particular service, and for each action, a list of all the arguments associated with the action (see section 2.3, beginning on page 21). The control point may invoke one of these actions, whereby in response, the device returns to the control point the results of the action (see section 3.2.2 on page 40). However, as described above, the UPnP architecture document does not explicitly describe user interface features for accessing and presenting such information. Nevertheless, generic control point tools, comprising graphical user interface elements for accessing and presenting such information from network devices, are known in the art.

For example Kekic discloses that, upon selection of a device in the above-described navigation tree, the user may select another button to open an “MIB Browser,” as is described above. This MIB Browser is used to access and display an “MIB file” of the device (see column 51, line 43 – column 2, line 45), whereby like the device description and service description provided by a UPnP device, this MIB file maintains device property and status information, and is used by the control point to invoke actions on the device (for example, see column 2, line 20 – column 4, line 49). Kekic teaches presenting user interface features within this MIB Browser to select, access, display, and set MIB variables. For example, the MIB Browser comprises an MIB File field having a button for displaying all the MIB files for the selected device (see column 51, line 49 – column 52, line 6). In response to selecting one of these MIB files and selecting a “Load” button, an “MIB Tree” field displays the MIB file, which comprise variables describing the selected MIB file (see column 51, line 62 – column 52, line 7). The user may query the value of one of these variables by selecting the variable and then selecting a “Get” button (see column 52, lines 12-22). In response, the result of the query is displayed in a “Result” field (see column 52, lines 12-22). Similarly, the user may set the value of a variable, considered analogous to

Art Unit: 2173

invoking an action, by selecting a variable within the MIB tree, entering a value within a "Set Value" field, and selecting a "Set" button (see column 52, lines 31-45). In response, the result of the set operation is displayed in the Result field (see column 52, lines 31-45). Kekic thus broadly teaches presenting graphical user interface elements for displaying state variable, selecting state variables, and accessing values of state variables, in addition to graphical user interface elements for displaying actions, selecting actions, inputting arguments corresponding to a selected action, and invoking the action.

As described above, it would have been obvious to one of ordinary skill in the art, having the teachings of the UPnP document and Kekic before him at the time the invention was made, to modify the control point taught by the UPnP document to include a generic control point tool, like that of Kekic, having user interface elements to discover and control UPnP devices in a uniform manner. It would have thus been obvious to display a selectable list of variables associated with each particular service, whereby a user may select one of these variables and then select a query button, which when selected, causes the user interface to determine and display a value associated with the selected variable, as taught by Kekic. Moreover, It would have been obvious to display a selectable list of actions for each of the services, whereby a user may select one of these actions to display arguments corresponding to the action, and may select an invoke action button, which when selected, causes the user interface to invoke the selected action, as taught by Kekic. It would have been advantageous to one of ordinary skill to utilize these combined teachings of the UPnP document and Kekic, because such graphical user interface elements provide a functionality for discovering and controlling network devices, even

Art Unit: 2173

if the vendor of the network device does not provide an interface to control the device, as is demonstrated by Kekic.

Accordingly, the UPnP document and Kekic further suggest a generic user control point tool having a user interface comprising: a query button that, when selected, causes the user interface to determine and display a value associated with a selected variable corresponding to a service selected from the list of services, wherein the user interface displays a selectable list of variables from the selected variable is selected; and an invoke action button that, when selected, causes the user interface to invoke a selected action for a service selected from a list of services, wherein the user interface displays a selectable list of actions that can be invoked and from which the selected action is selected, and wherein the user interface includes a field that displays arguments corresponding to the selected action, like recited in claims 37-41 and 51-53.

Claims 35-36, 42, 50, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over the UPnP architecture document and Kekic, as described above, and also over the Microsoft Word 2000 application (as demonstrated by the included screenshots). As described above, the UPnP architecture document and Kekic teach a generic user interface control point tool like that of claims 27 and 34, and method like that recited in claims 43 and 49, involving an interface that displays a selectable properties button corresponding to properties of selectable discovered UPnP devices, wherein the user control point tool obtains and displays, within a field, properties corresponding to a selected UPnP device when the selected UPnP device is selected from the list and when the selectable properties button is selected. As further described above such properties may comprise at least one URL to a service description document when information is available

Art Unit: 2173

for the services of the selected UPnP device in the service description document. Additionally, the device property information may comprise a URL to a presentation page comprising the UPnP device manufacturer's presentation user interface for the device (see section 2.1 beginning on page 17). It is understood that the user may open a browser and enter the URLs into a field in order to retrieve the corresponding service description document, as is known in the art. In the case of a URL linking to a service description document, the window of the browser is considered a service description viewer window, like recited in the claimed invention, as it is used to access and display a service description document, and since it is different from the window used to display discovery options. However, neither the UPnP architecture document nor Kekic explicitly disclose that the interface of the generic user control point tool displays a selectable view service description button that, when selected, causes the generic user control point tool to open such a service description viewer window for browsing the service description document, wherein the service description viewer window displays a selectable button, that when selected causes the generic user control point tool to display the service description document, as is recited in claims 35-36 and 50. Additionally, neither the UPnP architecture document nor Kekic explicitly disclose that the interface of the generic user control point tool displays a presentation button that, when selected, causes the interface to access and load a browser and then to access and load a UPnP device manufacturer's presentation user interface with the browser according to the URL of the selected UPnP device, as is expressed in claims 42 and 54. Microsoft Word 2000 (see figure 1) teaches displaying URLs as hyperlinks (as shown in figures 2 and 3), which may be selected to automatically open a browser window displaying the document associated with the hyperlink (shown in figure 4). Such a browser window may

Art Unit: 2173

comprise selectable buttons, such as a “refresh” button, which may be selected to cause the browser to access and display a refreshed version of the document, like recited in claim 36. It would have therefore been obvious to one of ordinary skill in the art, having the teachings of the UPnP architecture document, Kekic, and Microsoft Windows 2000 before him at the time the invention was made, to modify the displayed URLs identifying service description documents and a presentation page taught by the UPnP architecture document and Kekic, such that they are displayed as a hyperlinks as done in Microsoft Word 2000. It would have been advantageous to one of ordinary skill to use these combined teachings to present the service description document URL as a hyperlink, because as demonstrated by Microsoft Word 2000, such a hyperlink reduces the time required to access the associated service description document; the user may simply select the hyperlink instead of opening a browser window and then applying the browser to access and display the document. Such a hyperlink linking to a service description document is considered a selectable view service description button, like that described in claims 35-36 and 50, and a hyperlink linking to a presentation page is considered a presentation button, like that described in claims 42 and 54.

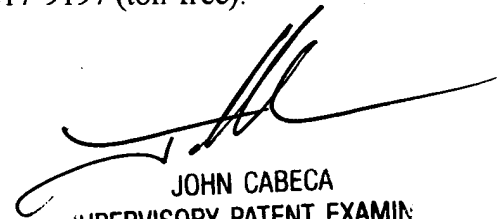
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blaine Basom whose telephone number is (571) 272-4044. The examiner can normally be reached on Monday through Friday, from 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on (571) 272-4048. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

btb



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